

CLAIMS

1. Apparatus for validating and storing bank notes, being of the type of apparatus mainly incorporated into automatic product vending machines by means of inserting coins and bank notes, as well as into game and prize recreational machines, wherein the apparatus comprises a note validation head and an element to be coupled below the note validation head, for storing notes validated as valid, the note validation head being defined by a hinged joining of two bodies, the bodies being attached according to an "L" shaped surface with a rounded vertex, shaping a channel along which the notes are moved for validation, the note validation head having means for detecting entrance of notes, means for controlling rotation and speed of a motor operating note pulling driving wheels, means for controlling movement of notes between the hinged bodies shaping the channel passing through the note validation head, means for obtaining the data of notes to be validated for comparison with the stored standard data and non-return security means for notes validated as valid, the element for storing notes validated as valid having a vertical entry housing, means for moving the notes to a final storage compartment and means for controlling coupling of the storage element to the head and filling of the storage element.

2. Apparatus for validating and storing bank notes according to claim 1, wherein the means for detecting entrance of the notes into the validation head comprise an optical sensor for sending an order to activate the motor operating pairs of wheels for moving the notes along the passing channel, and for activating a timer for performing the said manoeuvre.

3. Apparatus for validating and storing bank notes, according to claim 1, wherein the note validation head comprising the hinged joining of two bodies, attached according to an "L" shaped surface with a rounded vertex has a fixed body for coupling an element having a mouth for inserting notes to be validated.

4. Apparatus for validating and storing bank notes, according to any of claims 1 and 3, wherein the means for controlling rotation and speed of the motor operating the driving wheels for pulling the notes along, are housed in the fixed body shaping the validation head and comprise a disk associated to its rotation shaft and provided with grooves radial to its perimeter, in relation to which it has an optical sensor controlling its rotation and speed thereof.

5. Apparatus for validating and storing bank notes, according to any of claims 1 and 3, wherein the means for controlling the movement of the notes along the channel defined between the pair of hinged bodies shaping the note validation head comprise a wheel axially provided with a series of recesses in relation to which it has an optical sensor, being housed in the fixed body shaping the head, whose wheel is in direct contact with the pertinent note to be validated, to know its speed of movement and that it is related to the rotation speed of the motor operating the note pulling wheels.

6. Apparatus for validating and storing bank notes, according to claim 1, wherein the means for obtaining data of the notes to be validated for comparison with the stored standard data to validate notes as valid or false comprise a plurality of sensors which include at least one optical reflexive measurement sensor, at least one optical sensor

for measuring through the notes, and optionally a magnetic head to control position and correct advance of a note.

7. Apparatus for validating and storing bank notes, according to claim 1, wherein the non return security means for notes validated as valid comprise a substantially "U" shaped body having a core and wings, said "U" shaped body rotating round the core and being linked to the hinged body shaping the validation head; the wings being permitted to be housed, by being interposed in the channel along which the notes are moved, in respective recesses of the fixed body shaping the note validation head.

8. Apparatus for validating and storing bank notes, according to claim 7, wherein at least one of the recesses made in the fixed body shaping the note validation head, in which the wings of the non-return security "U" shaped body are housed has an optical sensor to prevent fraudulent withdrawal and to notify the payment received.

9. Apparatus for validating and storing bank notes, according to claim 1, wherein the storage element, to be coupled below the note validation head has a pair of wheels which in coupling to the head remain in contact with corresponding driving wheels pulling the notes through the head, defining, as a prolongation of the channel along which the notes are moved through the head, a thin vertical housing between a pair of fixed side members and a body intermediate to said fixed side members enabled to be moved so as to transfer the notes to the final storage compartment, said body being operated by means of a plurality of levers driven by a motor.

10. Apparatus for validating and storing bank notes, according to claim 9, wherein the final bank note storage

compartment has a moving wall on which notes are stored, said moving wall being guided at the bottom and being under stress by at least one spring so as to make the stored notes stop against the pair of fixed side members, said fixed side members defining on their other side the entry housing for notes validated as good.

11. Apparatus for validating and storing bank notes, according to claim 1, wherein the means for controlling coupling of the storage element to the validation head, and for controlling the note storage compartment filling, comprise a microprocessor.